Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (canceled)

Claim 2 (Currently amended): A biochip reader in accordance with claim [[1]] 17, ~~which~~ wherein the biochip reader is ~~of the~~ either a transmission type or ~~the~~ a reflection type.

Claim 3 (Currently amended): A biochip reader~~, having~~ comprising:

a light source configured to irradiate a sample ~~whose~~ having a flat surface ~~is flat~~ with an excitation light[[,]] ;

an image-forming optical system to form images of fluorescence generated from fluorescent substances in the sample via an image-forming optical system[[,]] irradiated by the excitation light; and

a detector to read the images[[;]] ~~with a detector~~ ,

wherein said image-forming optical system includes a barrier filter, ~~which acts~~ to transmit fluorescence from said sample ~~surface but~~ and to attenuate the excitation light reflected from said sample, [[is]] arranged ~~in said image-forming optical system~~ so that the excitation light reflected from said sample is incident to the barrier filter at an incident angle of ±5 degrees or less.

Claim 4 (Currently amended): A biochip reader in accordance with claim 3,

wherein said image-forming optical system further includes an image-forming lens forming the images, and

wherein said barrier filter is arranged between [[an]] said image-forming lens ~~in said image-forming optical system~~ and said detector ~~to detect images formed with this image-forming lens~~.

Claim 5 (currently amended): A biochip reader in accordance with claim 3, wherein the irradiation angle of the excitation light based on the light source in Koehler's illumination is configured to be ±5 degrees or less.

Claim 6 (currently amended): A biochip reader in accordance with claim 3 or claim 4, wherein, [[if a]] when the sample is irradiated ~~using~~ by a light source array generating a plurality of excitation light beams ~~whose~~ incident to the sample at an angle γ and having wavelengths that are different from each other, the barrier filter~~, to which the reflected excitation light is incident, based on excitation light that is incident to a sample at an incident angle γ,~~ is arranged oblique to said sample ~~surface~~ at the angle γ.

Claim 7 (currently amended): A biochip reader ~~configured~~ comprising:

a light source to irradiate a sample with an excitation light ~~to a sample,~~ ;

an image-forming optical system to form an image of fluorescence generated from fluorescent substances in said sample ~~via an image-forming optical system,~~ irradiated by the excitation light; and

a detector to read ~~that~~ the image ~~with a detector~~;

wherein [[an]] said image-forming optical system includes a convex image-forming lens ~~in said image-forming optical system is fabricated as a convex lens,~~ on whose flat side is formed an interfering filter for fluorescence.

Claims 8-9 (canceled).

Claim 10 (currently amended): A transmission type fluorescence reader ~~configured~~ comprising:

a light source to irradiate a sample with an excitation light ~~to a sample,~~ ;

an image-forming optical system to form an image of fluorescence generated from fluorescent substances in said sample ~~via an image-forming optical system, and~~ irradiated by the excitation light;

a detector to read ~~that~~ the image ~~with a detector~~; and

an objective lens arranged in either said image-forming optical system or immediately before said detector,

wherein said image-forming optical system includes one barrier filter, ~~(or two barrier filters)~~ which ~~act(s)~~ acts to transmit fluorescence from said fluorescent substances ~~but~~ and to attenuate the excitation light passing through said sample, ~~is (are)~~ arranged between the sample and said objective lens ~~in said image-forming optical system or immediately before said detector (or in both positions)~~, so that the excitation light passing through said sample is incident to the barrier filter at an incident angle of ±5 degrees or less.

Claim 11 (currently amended): A biochip reader that reads a biochip with fluorescence generated from genes of each of ~~it's~~ a plurality of cells by irradiating each cell with a coherent light ~~such as~~ including a laser light as ~~the~~ an excitation light[[;]] , said biochip reader comprising:

a rotation plate formed so as to be rotatable, on which a plurality of microlenses is arranged[[,]] ;

a two-dimensional detector that detects a fluorescence image of said biochip using detector elements arranged in a two-dimensional manner[[,]] ; and

a barrier filter positioned in ~~the~~ an image-forming optical system that forms an image on the detector surface by detecting fluorescence from said biochip[[;]] ,

~~further configured to rotate~~ wherein said rotation plate[[, to scan]] is rotated and said biochip is scanned with the light using excitation light beams individually condensed with [[a]] said plurality of microlenses, to individually irradiate each cell on said biochip, and at the same time to make said excitation light ~~to be~~ incident to said detector ~~side~~ incident to said barrier filter at an incident angle of ±5 degrees or less.

Claims 12-16 (canceled)

Claim 17(New) A biochip reader that reads a biochip with fluorescence generated from genes of each of a plurality of cells by irradiating each cell with a coherent light including a laser light as an excitation light, said biochip reader comprising:

a rotation plate formed so as to be rotatable, on which a plurality of microlenses is arranged; and

a two-dimensional detector that detects a fluorescence image of said biochip using detector elements arranged in a two-dimensional manner,

wherein said rotation plate is rotated and said biochip is scanned with the light using excitation light beams individually condensed with said plurality of microlenses to individually irradiate each cell.